

What is claimed is:

1. A method of delivering a heterologous nucleic acid to at least one muscle cell in a mammalian subject, comprising:
 - (a) providing at least one recombinant adeno-associated virus (rAAV) virion, said rAAV virion comprising an AAV-6 capsid and a heterologous nucleic acid operably linked to expression control elements; and
 - (b) administering said rAAV virions to said muscle cell, whereby expression of said heterologous nucleic acid provides for a therapeutic effect.
2. The method of claim 1, wherein said heterologous nucleic acid is a gene encoding a protein.
3. The method of claim 1, wherein said heterologous nucleic acid is an antisense RNA.
4. The method of claim 2, wherein said protein is a secreted protein.
5. The method of claim 4, wherein said secreted protein is selected from the group consisting of cytokines, growth factors, and differentiation factors.
6. The method of claim 2, wherein said protein is alpha1-antitrypsin or erythropoietin.
7. The method of claim 1, wherein said administering of said rAAV virions is by way of direct injection to said muscle cell of said mammalian subject.
8. The method of claim 7, wherein said muscle cell is a skeletal muscle cell.

9. The method of claim 1, wherein said administering of said rAAV virions is by way of administration to a vascular conduit of said mammalian subject.
10. The method of claim 9, wherein said vascular conduit is a vein.